

**State of Wisconsin/Department of Transportation
RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: December 31, 2002**

Project ID 0092-00-03

Project Title Evaluation of Storm Water Treatment Technologies for Highway Run-Off

Approved Starting Date (Contract Date): 8/30/2000

Estimated Completion Date: 9/30/2003

Primary Investigator: Judy A. Wierl, United States Geological Survey, [jawierl@usgs.gov] 608-821-3874.

WisDOT Technical Contact: Robert Pearson, P.G. , (608) 266-7980, Rm 451

Administrative Contact: Nina McLawhorn

Description: This study evaluates the efficiency of two storm water treatment devices. The devices treat water draining off the elevated freeway deck in Milwaukee (I94 @ Milwaukee River). The focus is determining the ability of the treatment devices to remove pollutants. Information on the maintenance needs for these devices is also being gathered.

Project Cost: \$116,000

**** Revised Budget = \$75K (original FY00)+\$5K (construction contingency FY02)+\$36K(additional monitoring FY03)**

Expenditures for current quarter:

Total Expenditures to date: \$33,796.70

Percent Complete:

Progress This Quarter: (Includes project committee meetings, work plan status, contract status, significant progress, etc.)

- Began storm water event sampling in April 2002 (equipment testing), but initiated regular sampling program in July 2002 (after drought period). During this quarter only 2 storm events were sampled because of lack of precipitation (low precipitation & lack of snow). To date approximately 11 storm events have been sampled at the North Treatment Device (Vortechincs) and 14 storm events have been sampled at the South Treatment Device (Stormwater Mgt).
- DOT received Technical Memo Report on Maintenance of Treatment Devices.
- DOT (Pearson & Cape) inspected treatment devices on November 7, 2002 and reported observations to USGS. Concurrently, USGS & DNR identified variations in TSS influent samples among devices. Concerns regarding mass balance calculations were discussed.
- In November 2002 it was decided that the inlet to the North Device (Vortechincs) required modification to eliminate backflow sediment settling in the inlet piping. USGS made modification to piping after consulting with Vortechincs engineers. Pipe adjustments were completed by USGS on January 8, 2003. The adjustments were necessary so as not to compromise the integrity of water quality results used for comparing the efficiency of the two different treatment devices (major study objective).

Work Next Quarter: (Includes project committee meetings, work plan status, contract status, significant progress, etc.)

- Continue storm event monitoring.
- Review all invoices recently received from the State Lab of Hygiene (\$21,821.35) and USGS (\$6,993.75). These invoices represent most of the water quality testing to date and labor for sampling and maintenance of sampling devices.

Determine how data sharing will occur for EPA ETV Program.

Circumstances Affecting Progress/Budget:

The field-monitoring program is active. Drought conditions and lack of snow in Wisconsin since project began last spring (2002) is affecting schedule some. Approximately 14 storm events have been sampled (11 at North Treatment Device and 14 at South Treatment Device).

Please attach Gantt Chart.